

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) In a graft tensioning device for use in joint repair surgery, a suture pulley assembly adapted so as to receive one or more looped sutures of varying size and equalize tension on both sides of the looped sutures, the suture pulley assembly comprising:

a rotatable pulley wheel comprising first and second pulley plates having a variable distance therebetween which sized and positioned so as to define a variable pulley space therebetween for accepting therein at least one looped suture, ~~wherein said pulley wheel is adapted to rotate so as to equalize tension between each side of the looped suture through rotation of said pulley wheel;~~

attaching means for rotatably attaching said pulley wheel to an adjustable tension applicator of the graft tensioning device, said pulley plates of said pulley wheel thereby rotating independently of the adjustable tension applicator when equalizing tension between each side of a looped suture; and

biasing means for biasing at least one of said pulley plates toward the other of said pulley plates in order for said pulley space defined by the distance between said first and second pulley plates to selectively increase or decrease in cross-sectional width as the distance between said pulley plates increases or decreases in response to insertion of differently sized sutures into said pulley space.

2. (Original) A suture pulley assembly as defined in claim 1, said attachment means comprising a post that passes through a central recess of each pulley plate and that is attached at a first end to the adjustable tension applicator of the graft tensioning device.

3. (Original) A suture pulley assembly as defined in claim 2, said post being fixedly attached to the adjustable tension applicator.

4. (Original) A suture pulley assembly as defined in claim 2, said post further comprising a flange at a second end opposite said first end and adjacent to one of said pulley plates, said flange overlapping at least a portion of an outer surface of said pulley plate adjacent to said flange.

5. (Original) A suture pulley assembly as defined in claim 1, said biasing means comprising a spring.

6. (Original) A suture pulley assembly as defined in claim 5, said spring being positioned between one of said pulley plates and the adjustable tension applicator of the graft tensioning device.

7. (Original) A suture pulley assembly as defined in claim 1, said first and second pulley plates spreading apart relative to each other so as to selectively define a larger pulley space in response to tying a half knot within one or more suture strands and then clamp the half knot while a remaining portion of the suture knot is tied.

8. (Original) A suture pulley assembly as defined in claim 1, said first and second pulley plates spreading apart relative to each other so as to selectively define a larger pulley space in response inserting a suture having a knot into said pulley space.

9. (Previously Presented) A graft tensioning device for use in joint repair surgery, comprising:

a suture pulley assembly as defined in claim 1; and

at least one adjustable tension applicator to which said suture pulley wheel of said suture pulley assembly is rotatably attached and which is configured to apply a desired tensile load to a looped suture attached to free ends of a looped tissue graft,

said suture pulley assembly being adapted for equalizing a tensile load applied by said adjustable tension applicator to each side of the looped suture.

10. (Original) A graft tensioning device as defined in claim 9, said graft tensioning device comprising two independently adjustable tension applicators and a separate suture pulley assembly as defined in claim 1 rotatably attached to each of said two independently adjustable tension applicators.

11. (Currently Amended) In a graft tensioning device for use in joint repair surgery, a suture pulley assembly adapted so as to receive one or more looped sutures of varying size and equalize tension on both sides of the looped sutures, the suture pulley assembly comprising:

a rotatable pulley wheel comprising first and second pulley plates having a variable distance therebetween which sized and positioned so as to define a variable pulley space therebetween for accepting therein at least one looped suture, ~~wherein said pulley wheel is adapted to rotate so as to equalize tension between each side of the looped suture through rotation of said pulley wheel;~~

a post attached at a first end to an adjustable tension applicator of the graft tensioning device,

said post passing through a central recess of each of said first and second pulley plates so as to rotatably attach said pulley wheel to the adjustable tension applicator and allow said pulley plates to rotate independently of the adjustable tension applicator when equalizing tension between each side of a looped suture;
and

a spring positioned relative to at least one of said first and second pulley plates so as to bias at least one of said pulley plates toward the other of said pulley plates in order for said pulley space defined by said distance between said first and second pulley plates to selectively increase or decrease in cross-sectional width as the distance between said pulley plates increases or decreases in response to insertion of differently sized sutures into said pulley space.

12. (Original) A suture pulley assembly as defined in claim 11, said first and second pulley plates having inner surfaces that define said pulley space.

13. (Original) A suture pulley assembly as defined in claim 12, at least a portion of said inner surfaces of said first and second pulley plates being angled so that at least a portion of said pulley space has decreasing width from an outer perimeter of said pulley plates toward a center of said pulley wheel.

14. (Original) A suture pulley assembly as defined in claim 13, a portion of said pulley space nearest said center of said pulley wheel having a constant width.

15. (Original) A suture pulley assembly as defined in claim 11, said first and second pulley plates spreading apart so as to temporarily define a larger pulley space in response to inserting a suture having a knot or half knot into said pulley space.

16. (Original) A suture pulley assembly as defined in claim 11, said post being fixedly attached to the adjustable tension applicator.

17. (Original) A suture pulley assembly as defined in claim 11, said post further comprising a flange at a second end opposite said first end and adjacent to one of said pulley plates, said flange overlapping at least a portion of an outer surface of said pulley plate adjacent to said flange.

18. (Original) A suture pulley assembly as defined in claim 17, said spring being positioned between one of said pulley plates and the adjustable tension applicator of the graft tensioning device.

19. (Original) A suture pulley assembly as defined in claim 17, said spring being positioned between one of said pulley plates and said flange of said post.

20. (Original) A suture pulley assembly as defined in claim 11, further comprising a sleeve disposed around at least a portion of said post between said post and an inner edge of each pulley plate defining said central recess.

21. (Original) A suture pulley assembly as defined in claim 20, said spring being disposed around a portion of said sleeve.

22. (Original) A suture pulley assembly as defined in claim 11, further comprising a washer disposed between said spring and the adjustable tension applicator of the graft tensioning device.

23. (Currently Amended) A graft tensioning device for use in joint repair surgery, comprising:

at least one adjustable tension applicator configured to apply varying tensile loads to a looped suture attached to free ends of a looped tissue graft; and

a suture pulley assembly attached to said adjustable tension applicator and adapted so as to transmit varying tensile loads from said adjustable tension applicator to the looped suture, said suture pulley assembly comprising:

a pulley wheel rotatably attached to said adjustable tension applicator and comprising first and second pulley plates which have a variable distance therebetween that sized and positioned so as to define a variable pulley space therebetween for accepting therein at least one looped suture, ~~wherein said pulley wheel is adapted so as to equalize tension between each side of the looped suture through rotation of said pulley wheel;~~

a post attached at a first end to ~~the~~ said adjustable tension applicator, said post passing through a central recess of each of said first and second pulley plates so as to rotatably attach said pulley wheel to ~~the~~ said adjustable tension applicator and allow said pulley plates to rotate independently of said adjustable tension applicator when equalizing tension between each side of a looped suture; and

a spring positioned relative to at least one of said first and second pulley plates so as to bias at least one of said pulley plates toward the other of said pulley plates in order for said pulley space defined by said distance between said first and second pulley plates to selectively increase or decrease in cross-sectional width as the distance between said pulley plates increases or decreases in response to insertion of differently sized sutures into said pulley space.